

PROCESS FOR THE PRODUCTION OF POLYURETHANE FOAMS

ABSTRACT OF THE DISCLOSURE

Polyurethane foams are continuously produced using CO₂ as the blowing agent and a filler. The filler is mixed with at least a portion of one of the reactive components and any agglomerates are virtually completely broken up during or subsequent to such mixing. The filler-containing mixture is passed through at least one filter element to filter out any oversize grains, residual agglomerates and / or impurities. The CO₂ is added under pressure to at least a portion of at least one of the reactive components to generate a mixture which comprises liquid CO₂ or a mixture which comprises liquid CO₂ and filler. This mixture is mixed with the other reactive component(s) and optionally further additives. The reactive mixture which includes CO₂ and filler is then decompressed by division into a plurality of individual streams at shear velocities above 500 s⁻¹ and the flow velocities thus generated are reduced before discharge. The reactive mixture is then applied to a substrate and allowed to cure to form a polyurethane foam.